

CLAIMS

1. A device comprising:
a base; and
5 a re-orientatable sample holder adapted on at least first and second sides to be repeatably mounted on the base;
characterised in that the relationship between the
at least two surfaces when mounted on the base is known
10 whereby when a sample is mounted to the re-orientatable sample holder, the relationship between the different orientations of the sample when different surfaces of the re-orientatable sample holder are received on the base is known.
- 15 2. A device according to claim 1, wherein the relationship between the at least two surfaces of the re-orientatable sample holder is established by a plurality of reference features on the re-orientatable
20 sample holder which provide positional information about the re-orientatable sample holder when received on a base.
3. A device according to claim 2, wherein the
25 reference features are provided by a reference block of known dimensions and having machined faces which adjoins the re-orientatable sample holder.
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4. A device according to claim 2, wherein the
30 reference features are provided by three spheres or three rods which protrude from the re-orientatable sample holder and are accessible regardless of which surface of the re-orientatable sample holder is received on the base.

5. A device according to any preceding claim wherein the re-orientatable sample holder is kinematically received on the base by a repeatable mount.

5 6. A device according to any preceding claim wherein the re-orientatable sample holder is adapted to receive teeth frameworks.

7. A device enabling operation on a sample in at
10 least two stages comprising:
a base;
a re-orientatable sample holder adapted on at least first and second sides to be repeatably mounted on the base; and

15 an operating system for operating on the sample when the at least first and second sides of the re-orientatable sample holder are repeatably mounted on the base;

characterised in that the relationship between the
20 at least first and second sides of the re-orientatable sample holder when mounted on the base is known enabling the at least two stages of an operation to be matched.

25 8. A method of operating on a sample in at least two stages comprising:

providing a base;

locating a re-orientatable sample holder on the

30 ~~base the re-orientatable sample holder being adapted on~~
at least first and second sides to co-operate with the base;

providing a plurality of reference features capable of supplying data about the position of the re-orientatable sample holder; and

furnishing an operating system;

wherein a first operation is made by the operating system when the first side of the re-orientatable sample holder co-operates with the base and a second
5 operation is made when the second side of the re-orientatable sample holder co-operates with the base and the at least two operations are matched together using the data provided by the reference features.

10 9. A method of operating on a sample in at least two stages comprising the steps of:

providing a base;

providing a re-orientatable sample holder which is adapted to be received kinematically on the base on at
15 least first and second sides wherein the relationship between the first and second sides is known;

placing the re-orientatable sample holder on the base on its first side;

operating on a first stage of a sample held in the
20 sample holder;

re-orientating the sample holder with respect to the base onto its second side;

operating on a second stage of a sample held in the sample holder;

25 wherein the operations of the first and second stages of the sample are matched using the relationship between the first and second sides.
